

Unit 1 Review:

- Population and sample
 - Sample is a part of the population
 - Why use samples?
 - Difficult to get info for entire population
 - Draw inferences from sample and apply to population → Be specific with population and sample

5 W's (+1):

- These come from the study, not who is reporting the study
- Who, What, When, Where, Why, How
- What → Variables
- Types of variables:
 - Categorical → characteristics
 - Quantitative → numbers
 - Numbers are used in categorical variables, but they are used as counters

Categorical Variables:

- We can create frequency and relative frequency tables
 - Frequency table \rightarrow counts of each category
 - Relative frequency table \rightarrow percentages for each category
- Displaying data:
 - Bar graph
 - Pie chart
- Marginal Distribution Table:
 - Two variables \rightarrow one for rows, one for columns
 - Has totals in the "margins"
 - Point is to show if relationships exist between the variables
- Contingency Tables:
 - Based of a marginal distribution table
 - We do percentages either for rows or columns
 - Point is to see if relationships exist between variables
 - When finding percentages, be careful as to which value and total value you use

Example:

- Sample \rightarrow 200 adults at supermarket
- Population \rightarrow All adults at this supermarket

1. Who: 200 adults

What: Smoking \rightarrow C

Education \rightarrow C

When: N/A

Where: N/A or supermarket

Why: To see if there is a relationship between smoking and education level

How: Ask people

$$3. a) \frac{\text{smokers w/high school education}}{\text{total shoppers}}$$

$$= \left(\frac{32}{200}\right)(100\%)$$

$$= 16\%$$

$$b) \frac{\text{smokers w/high school education}}{\text{total of high school education}}$$

$$= \left(\frac{32}{93}\right)(100\%)$$

$$= 34\%$$

$$c) \frac{\text{smokers w/high school education}}{\text{total smokers}}$$

$$= \left(\frac{32}{50}\right)(100\%)$$

$$= 64\%$$

4. Yes, there is an association between smoking and education.
(Use data to show this.)

5. No, because we do not know when people started smoking.